No. 630,855. Patented Aug. 15, 1899.

E. S. BROOKS.

BULLETIN.

(Application filed Jan. 5, 1899.)

(No Model.) 2 Sheets—Sheet 1.

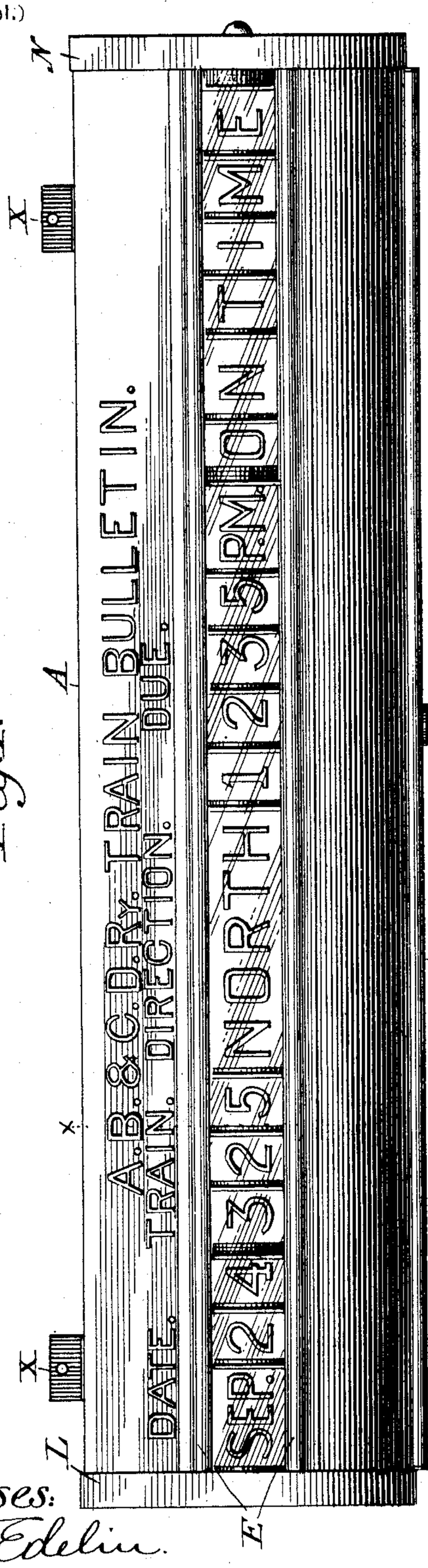

Fig. 1.

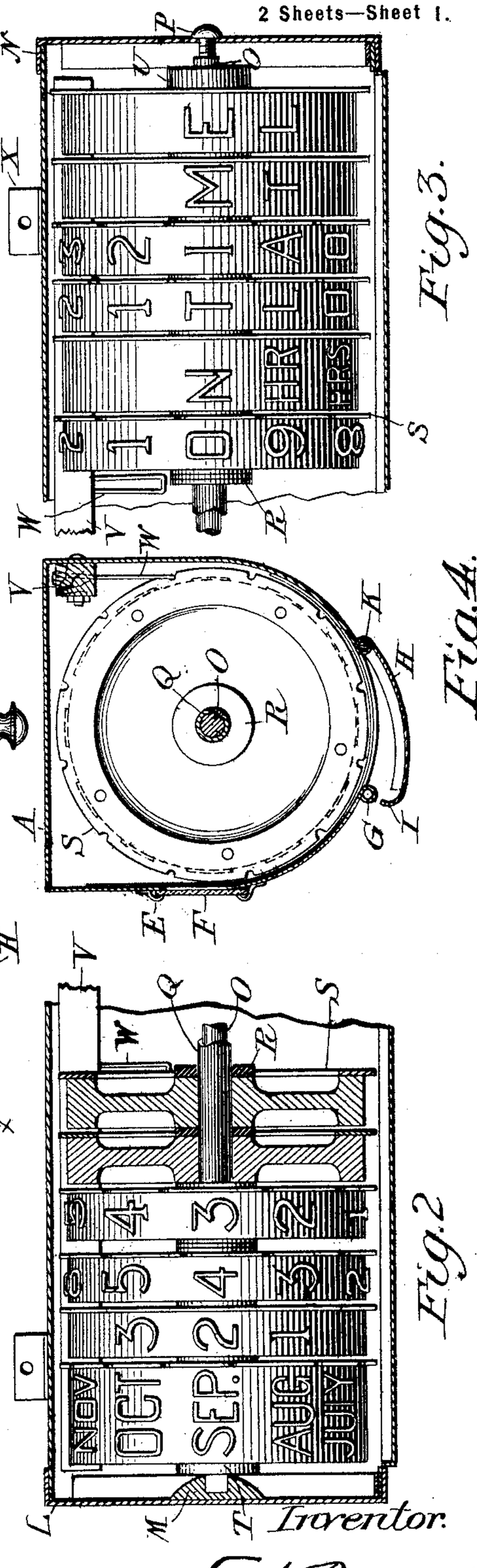

Fig. 3.

Fig. 4.

Fig. 2.

Witnesses:
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Fig. 5.

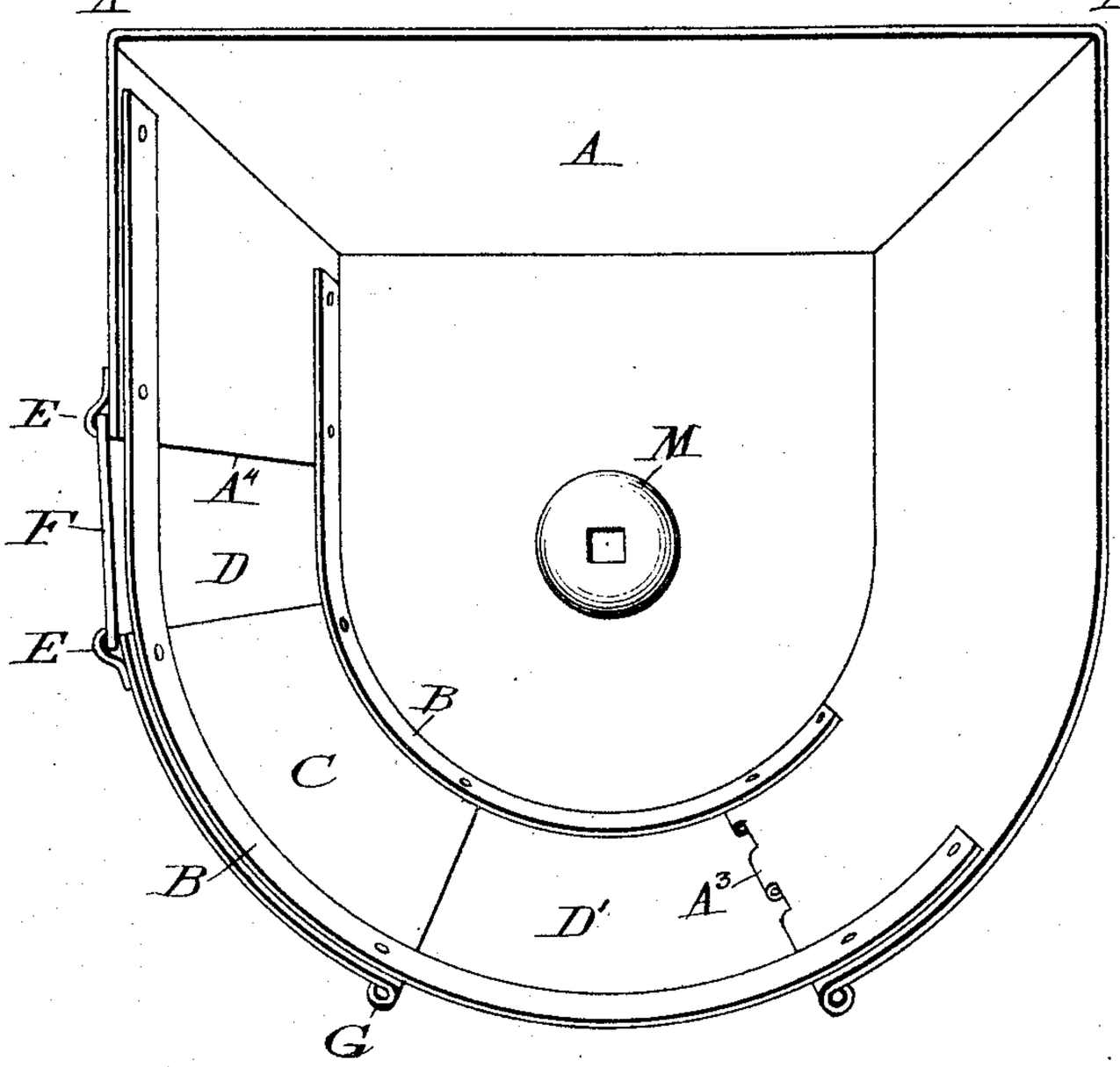
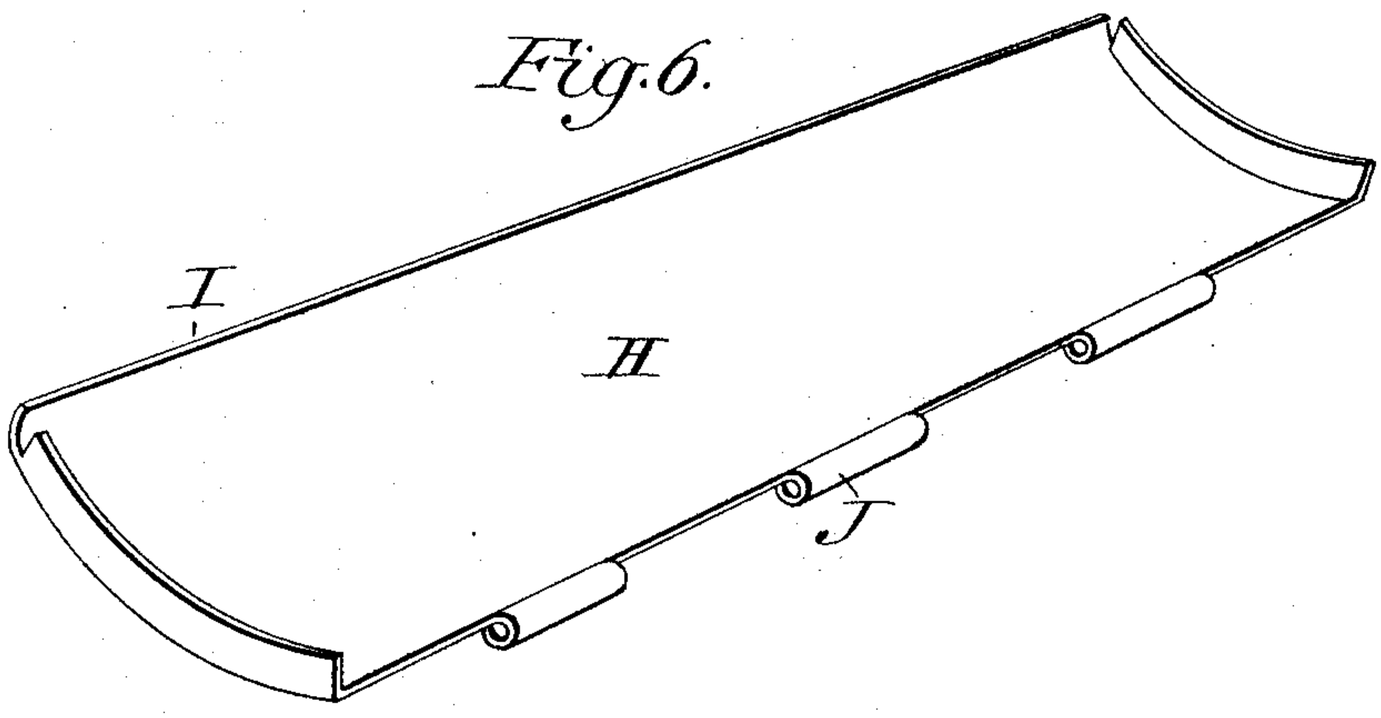


Fig. 6.



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UNITED STATES PATENT OFFICE.

EMERSON S. BROOKS, OF TOLEDO, OHIO.

BULLETIN.

SPECIFICATION forming part of Letters Patent No. 630,855, dated August 15, 1899.

Application filed January 5, 1899. Serial No. 701,231. (No model.)

To all whom it may concern:

Be it known that I, EMERSON S. BROOKS, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented a certain new and useful Bulletin, of which the following is a specification.

The main or generic object of my invention is the production of a bulletin provided with adjustable means having letters, figures, or both, or other characters or symbols thereon for imparting when properly combined any desired information which shall be cheap in first cost, simple in construction, easily manipulated, and not liable to become deranged.

A further and specific object is the production of a bulletin adapted for use in indicating the time at which a railway-train is due at a station or its departure therefrom and which shall also indicate, when desired, the day of the month, the number of the train, the direction, and whether the train is on time or late, and if overdue the period of time.

With these objects in view my invention consists in an elongated casing or box having a door and supporting a shaft upon which are mounted rollers provided with characters or letters or figures, said rollers being adapted for adjustment one relative to another and in line with a longitudinal opening in the side of the casing or box and held in place by suitable means, such as looped-wire springs.

It further consists in a casing or box having a door, a longitudinal opening, a shaft upon which are mounted circular rollers, notched disks, and means for engaging the disks.

Still further, it consists in a box having a door at the bottom, a longitudinal slot in the side, and a shaft upon which are mounted adjustable rollers.

Finally, it consists in certain novelties of construction and combinations of parts hereinafter described and shown, and particularly pointed out in the claims.

The accompanying drawings illustrate one example only of the physical embodiment of my invention and which is constructed according to the best of the several modes I have so far devised for the application of the principle.

Figure 1 is a side view in elevation of the example which is specifically adapted for use as a train-bulletin. Fig. 2 shows the interior elements of the bulletin, which are located at the left-hand end thereof, embracing the shaft, the rollers, the washers, the disks, and the wire springs, four rollers being in elevation and two in section. Fig. 3 illustrates the relative disposition of the rollers and shaft at the right-hand end of the bulletin, the front of the casing being removed. Fig. 4 is a section taken on line $x\,x$ of Fig. 1, looking toward the left. Fig. 5 is a perspective view of the casing or box with one of the end covers removed. Fig. 6 is a view of the door in perspective.

Referring to the several figures, the letter A designates a piece of galvanized iron bent on longitudinal lines to form angles at A' A^2. The right-hand portion, as shown in Fig. 5, is curved downwardly and the free edge at A^3 turned or rolled upon itself and cut away at intervals, so as to constitute an element of a hinge. The edge A^4 is left plain.

B B are curved strips of metal riveted to the piece A adjacent the ends thereof and upon the inside surface.

C is a curved piece of metal of the same length as A, riveted to the strips B B on their outside surfaces, so as to leave longitudinal openings at D and D′, each respectively one inch and two inches wide.

E E are two pieces of galvanized iron, each twenty and one-half inches in length, soldered along one edge to the edges of the opening D, made in the side of the box.

F designates a piece of glass twenty and one-half inches long by one and one-half inches wide, held in place between the free edges of the strips E E and the edges A^3 of the piece A and the piece C, as clearly shown in Figs. 1 and 4.

G is the edge of the piece C, rolled upon itself longitudinally; H, a door having a curved edge I at the front adapted to spring over the rolled edge G and to be frictionally held in place thereby; J, elements of the hinge, consisting of integral parts of the edge of the door rolled upon itself; K, a rod which serves

to pivotally unite the door to the curved edge A^3 of the casing; L, a cover fitting over the end of the box and soldered in place; M, a circular piece of metal having a square hole and soldered to the center of the cover upon the inside; N, a cover for the opposite end of the box, having a hole through the center; O, a shaft three-eighths of an inch in diameter and one-fourth inch square at one end to fit the square hole in the piece M on the cover; P, a screw passed through the hole in the cover and adjustable in the end of the shaft; Q, a brass tube on the shaft. A series of eighteen circular rollers, each four and one-half inches in diameter, are loosely supported on the tube Q and shaft O, as illustrated.

R designates the washers separating adjacent rollers; S, notched tin disks secured to the sides of the rollers, each disk being of larger diameter than a roller, so as to have an edge projecting one-eighth of an inch approximately.

T and U are washers soldered on the shaft at each end thereof to hold the rollers permanently on the tube.

V is a wooden bar three-fourths of an inch by one-half inch by twenty inches bolted to the rear inside upper part of the box; W, looped springs of twenty-seven-thousandths piano wire, having the loops located within the notch in the disks S and the free ends passed through the bar V and turned over to hold them against withdrawal, and X designates hangers by means of which the entire device can be detachably supported when in use.

The example of the bulletin described and shown on the drawings is twenty-one and one-half inches long by about five inches in diameter and weighs nearly eight pounds.

The number of rollers to be mounted on the shaft and the characters, letters, figures, symbols, &c., to be placed on the surface of the rollers will depend, of course, upon the purpose which the particular bulletin is to subserve. Inasmuch as this example is for use as a train-bulletin the characters selected are confined to letters and figures. The roller at the extreme left serves to indicate the months of the year and so has painted around its circumference the abbreviations or names of the months. The third, fifth, sixth, ninth, tenth, eleventh, and thirteenth rollers each display numerals from "1" to "0." The second roller bears numbers from "1" to "3," the fourth from "1" to "5," the eighth the numeral "1," and the sixteenth the numerals from "1" to "0" and the letter "A." The seventh roller has the words "North," "South," "East," "West;" the twelfth, the letters "A. M." and "P. M.;" the fourteenth, the letters "N," "Hr," "Hrs;" the seventeenth, the letters "Mt;" the eighteenth, the letters "El," and the fifteenth the numerals from "1" to "0" and the letters "Tl." It is obvious that by turning the rollers an innumerable number of combinations of the letters, figures, and words can be formed, and especially such combinations as will give the desired information relating to the arrival of a train, such as the date, number of the train, direction, time due, and whether on time or late, and if late the period of time. Upon the box and above the glass may be printed any words which will aid in understanding the significance of the characters displayed through the glass. The drawings show the words "Date," "Train," "Direction," and "Due;" but others may be added if found desirable.

The manipulations in using the bulletin are quite simple, all that is necessary in changing a combination being to drop the door and with the fingers turn the rollers till the wire springs, riding over the edges of the disks, drop into the desired notches which correspond with the characters to be displayed.

From the foregoing it will be seen that I have produced a bulletin suited to fulfil all the conditions set forth and which possesses many novel and desirable characteristics and features of construction, adaptation, and operation. The door being located at the bottom of the box prevents the ingress of dirt, snow, or rain. The rollers having the notched disks provide for easy adjustment and the retention of the rollers in place when subjected to vibrations imparted by a moving train, and the several parts being made up of simple elements allows the bulletin to be manufactured at a very moderate first cost.

While I have shown and described only one example of the physical embodiment of my invention, I do not thereby intend to limit the scope thereof to such example, inasmuch as many changes may be introduced, depending on the use to which the bulletin is to be adapted. For the letters and figures shown may be substituted other characters or symbols. The box, rollers, and other elements may be made of any material and of any suitable dimensions, the location of the parts altered, and many other modifications introduced, whether the device is to be used as a train or other bulletin. All such variations and others I intend to embrace within the scope of my claims.

What I claim is—

1. The combination in a bulletin, constructed substantially as described, of a piece of metal A; a curved piece of metal C; strips of metal B B riveted to the ends of elements A and C; covers L and N fitting over the ends of elements A and C; a door H hinged to element A; and shaft O engaging the covers and supporting-rollers; in substance as set forth.

2. The combination in a bulletin, constructed substantially as described, of a casing; a shaft; rollers on the shaft; disks each having a series of notches; and looped-wire springs secured to the casing at one end and adapted to engage the notches in the disks at the other end.

3. The combination in a bulletin, construct-

ed substantially as described, of a casing; a shaft supported by the casing; rollers having symbols mounted on the shaft; washers between the rollers; and notched disks and springs engaging the disks.

4. The combination in a bulletin, constructed substantially as described, of a casing having a longitudinal opening; a door; a permanent end cover L; a removable end cover N; a shaft supported by the end covers; and rollers on the shaft.

5. The combination in a bulletin, constructed substantially as described, of a casing; end covers L and N; a metallic piece M having an angular hole secured to the cover L; a shaft having an angular end; rollers on the shaft; and a screw P for supporting the opposite end of the shaft.

In testimony whereof I affix my signature in presence of two witnesses.

EMERSON S. BROOKS.

Witnesses:

WM. KLINE,

A. H. SMITH.